AF/2616

TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.: NRT.0027US

In Re Application Of: **Jerry L. Mizell et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/609,913	07-03-2000	Christine Y. Ng	21906	2616	3274

Invention: **Packet-Switched Communications in a Mobile Network**

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:
September 21, 2006.

The fee for filing this Appeal Brief is: **$500.00**

☒ A check in the amount of the fee is enclosed.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 20-1504 (NRT.0027US). I have enclosed a duplicate copy of this sheet.

☐ Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Signature

Dated: **November 21, 2006**

Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
1616 South Voss Road, Suite 750
Houston, TX 77057-2631
Telephone: (713) 468-8880, ext. 304
Facsimile: (713) 468-8883

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

11-21-2006
(Date)

Signature of Person Mailing Correspondence

Ginger Yount

Typed or Printed Name of Person Mailing Correspondence

cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Jerry L. Mizell et al.	§	Group Art Unit:	2616
Serial No.:	09/609,913	§		
		§	Examiner:	Christine Y. Ng
Filed:	July 3, 2000	§		
For:	Packet-Switched Communications In A Mobile Network	§	Atty. Dkt. No.:	NRT.0027US (11439RRUS02U)

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37

Sir:

The rejection of claims 2, 3, 8-10, 19-21, 40-44, 46, and 49-51 is hereby appealed.

I. REAL PARTY IN INTEREST

The real party in interest is Nortel Networks Limited.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 2, 3, 8-10, 19-21, 40-44, 46, and 49-51 have been twice rejected and are the subject of this appeal. Claims 1, 4-7, 11-18, 22-39, 45, 47, and 48 have been cancelled.

Date of Deposit: November 21, 2006

I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as **first class mail** with sufficient postage on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

Ginger Yount

Ginger Yount

IV. STATUS OF AMENDMENTS

No amendment after final has been submitted.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

Independent claim 2 recites a serving GPRS support node (SGSN) (Fig. 1:12) for use in a mobile communications network having a plurality of cell sites, comprising:

> an interface adapted to communicate with a base station system in a cell site over a Gb network (Fig. 1:16; Fig. 2:16; Spec., 6:9-11); and
>
> a controller (Fig. 19:810, 814) adapted to transmit and receive data through the interface over the Gb network with the base station system according to a connectionless, packet-based protocol (Spec., 4:31-5:6; 6:30-33),
>
> wherein the interface includes a connectionless, packet-based protocol layer (Fig. 4:126; Fig. 6:148) to communicate packets with a connectionless, packet-based protocol layer in the base station system (Spec., 8:28-30; 9:7-13).

Independent claim 19 recites a serving General Packet Radio Service (GPRS) support node (Fig. 1:12) for use in a mobile communications system having base station systems, comprising:

> an interface to one or more networks (Fig. 1:16; Fig. 2:16) coupled to the base station systems, the interface comprising a packet-switched element (Fig. 4:126; Fig. 6:148) to manage communication over a network between the serving GPRS support node and at least one of the base station systems (Spec., 4:31-5:6; 6:30-33; 8:28-30; 9:7-13),
>
> wherein the packet-switched element comprises an Internet Protocol element (Fig. 4:126; Fig. 6:148) to communicate packets with an Internet Protocol element in the at least one base station system (Spec., 5:11-18).

Independent claim 42 recites a system (Fig. 1:12) for use in a mobile communications network having a plurality of cell sites, comprising:

> an interface adapted to communicate with a base station system in a cell site over a network (Fig. 1:16; Fig. 2:16; Spec., 6:9-11); and
>
> a controller (Fig. 19: 810, 814) adapted to transmit and receive data through the interface over the network with the base station system according to a packet-switched protocol (Spec., 4:31-5:6; 6:30-33),
>
> wherein the interface comprises a network layer (Fig. 4:126; Fig. 6:148) to manage communications of packets over the network, and a transport layer (Fig. 4:124; Fig. 6:146) to manage connections over the network (Spec., 8:28-30; 9:7-13),
>
> wherein the controller comprises a network services layer (Fig. 4:122; Fig. 6:144) to transport packets through the transport and network layers (Spec., 8:28-30; 9:7-13),
>
> wherein the network layer comprises an Internet Protocol layer (Fig. 4:126; Fig. 6:148) to communicate over a Gb network (Fig. 1:16; Fig. 2:16) with an Internet Protocol layer of the base station system (Spec., 4:31-5:6; 6:30-33).

Independent claim 46 recites a node (Fig. 1:15) for use in a mobile communications network having a system controller, the node comprising:

> one or more radio transceivers (Fig. 1:58) adapted to communicate with mobile stations (Spec., 6:33-7:4); and
>
> a module (Fig. 19:800, 804) coupled to the one or more radio transceivers and adapted to communicate through a Gb interface with the system controller according to a packet-switched protocol (Spec., 4:31-5:6; 6:30-33; 16:1-3),
>
> wherein the packet-switched protocol comprises a connectionless, packet-based protocol (Spec., 4:31-5:6).

Independent claim 50 recites a node (Fig. 1:15) for use in a mobile communications network having a system controller, the node comprising:

> one or more radio transceivers (Fig. 1:58) adapted to communicate with mobile stations (Spec., 6:33-7:4);
>
> a module (Fig. 19:800, 804) coupled to the one or more radio transceivers and adapted to communicate with the system controller (Spec., 4:31-5:6; 6:30-33); and
>
> an Internet Protocol layer (Fig. 4:126; Fig. 6:148) to communicate over a Gb network with the system controller according to an Internet Protocol (Spec., 8:28-30; 9:7-13).

Independent claim 51 recites a method of communicating in a mobile communications system having a base station system (Fig. 1:15), a system controller (Fig. 1:12), and an interface (Fig. 1:16; Fig. 2:16) between the base station system and the system controller, the method comprising:

> transmitting and receiving data packets over the interface between the base station system and system controller according to a packet-switched protocol (Spec., 4:31-5:6; 6:30-33),
>
> wherein transmitting and receiving data packets comprises an Internet Protocol layer in the system controller transmitting and receiving Internet Protocol packets over a Gb network with an Internet Protocol layer in the base station system (Fig. 4:126; Fig. 6:148; Spec., 5:11-18).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 2, 3, 8, 19, 20, 40-43, 46, And 49-51 Rejected Under 35 U.S.C. § 103 Over U.S. Patent Application Publication No. 2002/0048268 (Menon) In View Of U.S. Patent No. 6,512,756 (Mustajarvi).

B. Claims 9 And 10 Rejected Under 35 U.S.C. § 103 Over Menon In View Of Mustajarvi And U.S. Patent No. 6,763,007 (La Porta).

C. Claims 21 And 44 Rejected Under 35 U.S.C. § 103 Over Menon In View Of Mustajarvi And U.S. Patent No. 6,320,873 (Nevo).

VII. ARGUMENT

The claims do not stand or fall together. Instead, Appellant presents separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-headings as required by 37 C.F.R. § 41.37(c)(1)(vii).

A. Claims 2, 3, 8, 19, 20, 40-43, 46, And 49-51 Rejected Under 35 U.S.C. § 103 Over U.S. Patent Application Publication No. 2002/0048268 (Menon) In View Of U.S. Patent No. 6,512,756 (Mustajarvi).

1. Claims 2, 3, 8, 19, 20, 40-43, 46, and 49-51.

Independent claim 2 recites, *inter alia*, a serving GPRS support node (SGSN) that has an interface to communicate with a base station system in a cell site over a Gb network, and a controller to transmit and receive data through the interface over the Gb network with the base station system according to a connectionless, packet-based protocol.

Claim 2 was rejected as being obvious over Menon and Mustajarvi. It is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 2 for at least the reason that no motivation or suggestion existed to combine the teachings of Menon and Mustajarvi to achieve the claimed invention. *See* M.P.E.P. § 2143 (8th ed., Rev. 5), at 2100-126.

As conceded by the Examiner, Menon does not disclose a Gb network. 6/23/2006 Office Action at 3. However, the Examiner cited Mustajarvi as disclosing such a Gb network. *Id.* The proposed combination of Menon and Mustajarvi is erroneous as no motivation or suggestion existed for the combination.

Menon describes two general embodiments, depicted in Figs. 1 and 5. In Fig. 1, a CPRU (customer premise radio unit) 25 communicates with a base station 30 over an air interface. In turn, the base station 30 communicates with a WARP (Wireless Adjunct InteRnet Platform) 32, which is connected to an access router 35. In Fig. 5 of Menon, a CPRU is linked to the base station 101 over an air interface, and the base station 101 is linked to an access router. Although Menon does refer to GPRS, it is noted that Menon clearly does *not* contemplate the use of a Gb network. Instead, Menon teaches that GPRS can be used between the CPRU and a base station

(*see, e.g.*, ¶¶ [0075], [0210], [0251], [0257], [0267], [0362], and [0392]). Menon clearly does not disclose or even remotely suggest that the interface between the WARP and access router (Fig. 1) or the base station and access router (Fig. 5) employs a GPRS-based network, such as the Gb network.

The Examiner asserted that the access router in Fig. 5 of Menon provides similar functions as the SGSN in a GPRS system. 6/23/2006 Office Action at 3. However, the Examiner ignored the specific teachings that are shown in the details of Menon, particularly in Fig. 24 of Menon, which shows additional details of the nodes depicted in Fig. 5 of Menon. As disclosed in Fig. 24, the interface between the BTS and the access router taught by Menon is clearly quite different from the Gb network recited in the claim.

Fig. 24 of Menon shows the various layers of the BTS and access router. *See* Menon, ¶ [0292] (indicating that Fig. 24 shows the packet data signaling plane architecture 325 of the system 100 depicted in Fig. 5). There are no layers in Fig. 24 of Menon that would provide any suggestion that a Gb interface between the BTS and access router can be used. Moreover, it is noted that the arrangement of Menon is fundamentally different from mobile communications networks that employ Gb networks between base station systems and SGSNs. Although Menon teaches the use of wireless communication, the wireless communication is between a fixed location CPRU (see Fig. 1 of Menon) and a BTS. The CPRU (customer premise radio unit) is associated with a home or business premise, and the CPRU is connected to computing devices by "standard wireline cabling 41." Menon, ¶¶ [0065]-[0066]. Fig. 25 of Menon shows a physical connection between a PC and the CPRU that is a wireline interface. *See* Menon, ¶ [0308]. Additionally, Figs. 28-33 of Menon depict twisted pair connections (wireline connections) between phone/fax devices and the CPRU. Thus, fundamentally, the communication interfaces

used in the overall architecture of Menon differ significantly from the interfaces used in mobile communications networks in which Gb interfaces are used, where terminal devices are mobile rather than connected by fixed wireline connections to a customer premise unit as in Menon.

Consequently, a person of ordinary skill in the art would not have been motivated to modify the access router and BTS of Menon to incorporate a Gb interface.

In the obviousness rejection, the Examiner also made the assertion that Fig. 5 of Menon is "similar" to structure disclosed by Fig. 1 of Mustajarvi. 6/23/2006 Office Action at 3, 8. However, in making the statement that the structure in Fig. 5 of Menon is "similar" to the structure in Fig. 1 of Mustajarvi, the Examiner has ignored the detailed view of the high level block diagram of Fig. 5 of Menon (*see* Fig. 24), as well as the detailed depiction of the layers of the BSS and SGSN in Fig. 2 of Mustajarvi. The detailed views of Fig. 24 of Menon and Fig. 2 of Mustajarvi are clearly quite different. There are no layers in Fig. 24 of Menon that would even provide any suggestion that a Gb interface is provided between the BTS and the access router. On the other hand, Fig. 2 of Mustajarvi depicts a Gb interface between the BSS and SGSN that is a traditional *Frame Relay* interface (a connection-oriented interface), with Mustajarvi providing absolutely no suggestion of a connectionless, packet-based protocol for the Gb interface. Thus, the statement by the Examiner that Menon and Mustajarvi are "similar" is clearly erroneous.

The teachings of Menon would actually have led a person of ordinary skill in the art to use a network different from a GPRS-based network, such as the Gb network, between the WARP and access router or between the base station and access router. Specifically, the network between a WARP and access router or between a base station and access router in Menon is not a GPRS-based network, a point recognized by the Examiner. In ¶ [0081], Menon

teaches that bearer voice messages are transmitted between a CPRU and a WARP using GSM/GPRS protocols. Significantly, this paragraph of Menon also states that the WARP "interworks the GSM/GPRS bearer voice messages to VoIP (voice IP) based messages for transmission toward the network, *i.e.*, towards switched circuit network 50." There is no indication whatsoever that the link between the WARP and the access router or the link between the base station and the access router is a GPRS-based interface. In fact, Fig. 21 of Menon shows the protocol layers between the WARP and an SMP – there are no layers for a Gb interface in Fig. 21. As noted above, Fig. 24 of Menon shows the interface between a base station and an access router – again, there are no layers that correspond to a Gb interface. Fig. 25 shows the interface between a WARP and access router; similarly, there are no layers corresponding to a Gb interface in Fig. 25. Thus, it is clear that Menon would have suggested a different type of interface (that is, a non-GPRS based interface) between the access router and the WARP or base station.

The Examiner cited two cases as purportedly supporting the obviousness rejection: *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); and *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 194 (Fed. Cir. 1992). 6/23/2006 Office Action at 8. Note that *In re Fine* holds that the "PTO has the burden under section 103 to establish a *prima facie* case of obviousness." *In re Fine*, 837 F.2d at 1074. "It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *Id.* The Examiner has failed to do so in this case. Moreover, it is clear that the Examiner has engaged in using impermissible hindsight to piece together elements of un-related references, in this case Menon and Mustajarvi.

As held by *In re Fine*, "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *Id.* at 1075.

In fact, the comparison of Fig. 5 of Menon to Fig. 1 of Mustajarvi performed by the Examiner is an example of generalization specifically criticized by the *In re Jones* case. As stated by *In re Jones*, "this court has previously stated that generalization is to be avoided insofar as specific structures are alleged to be *prima facie* obvious one from the other." *In re Jones*, 958 F.2d at 350. As stated by *In re Jones*, "[b]efore the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art." *Id.* at 351. Here, the teachings of Menon and Mustajarvi are clearly disparate, with one proposing a non-Gb based network between a BTS and an access router, while the other teaches use of a Frame Relay-based Gb interface, rather than an interface that is based on a connectionless, packet-based protocol.

A person of ordinary skill in the art looking to the teachings of Menon and Mustajarvi would have been taught one of two things: (1) an IP interface over a *non*-Gb network can be provided between a base station or WARP and an access router; or (2) a *Frame Relay Gb* network can be used between a base station and an SGSN. This person of ordinary skill in the art would not have been motivated to modify the teachings of either Menon or Mustajarvi to achieve a Gb network that is according to a connectionless, packet-based protocol. Therefore, in view of the foregoing, it is respectfully submitted that there existed no motivation or suggestion to combine Menon and Mustajarvi in the manner proposed by the Office Action, and that therefore a *prima facie* case of obviousness cannot be established with respect to claim 2 (and its dependent claims).

Independent claims 42, 46, 50, and 51 (and their dependent claims) are similarly allowable over the asserted combination of Menon and Mustajarvi.

In view of the foregoing, reversal of the rejection of the above claims is respectfully requested.

B. Claims 9 And 10 Rejected Under 35 U.S.C. § 103 Over Menon In View Of Mustajarvi And U.S. Patent No. 6,763,007 (La Porta).

1. Claims 9 and 10.

In view of the allowability of base claim 46 over Menon and Mustajarvi, it is respectfully submitted that the obviousness rejection of claims 9 and 10 over Menon, Mustajarvi, and La Porta has also been overcome. Therefore, reversal of the rejection of the above claims is respectfully requested.

C. Claims 21 And 44 Rejected Under 35 U.S.C. § 103 Over Menon In View Of Mustajarvi And U.S. Patent No. 6,320,873 (Nevo).

1. Claims 21 and 44.

In view of the allowability of base claims 19 and 42 over Menon and Mustajarvi, it is respectfully submitted that the obviousness rejection of dependent claims 21 and 44 over Menon, Mustajarvi, and Nevo is also defective.

Reversal of the rejection of the above claims is respectfully requested.

VIII. CONCLUSION

In view of the foregoing, reversal of all final rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

Date: Nov 21, 2006

Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
1616 South Voss Road, Suite 750
Houston, TX 77057-2631
Telephone: (713) 468-8880
Facsimile: (713) 468-8883

APPENDIX OF APPEALED CLAIMS

The claims on appeal are:

2. A serving GPRS support node (SGSN) for use in a mobile communications network having a plurality of cell sites, comprising:

an interface adapted to communicate with a base station system in a cell site over a Gb network; and

a controller adapted to transmit and receive data through the interface over the Gb network with the base station system according to a connectionless, packet-based protocol,

wherein the interface includes a connectionless, packet-based protocol layer to communicate packets with a connectionless, packet-based protocol layer in the base station system.

3. The SGSN of claim 2, wherein the connectionless, packet-based protocol comprises an Internet Protocol.

8. The node of claim 46, wherein the packet-switched protocol comprises an Internet Protocol.

9. The node of claim 46, wherein the module is adapted to communicate data packets, each packet containing addresses identifying the node and the system controller.

10. The node of claim 9, wherein each packet contains Internet Protocol addresses.

19. A serving General Packet Radio Service (GPRS) support node for use in a mobile communications system having base station systems, comprising:

an interface to one or more networks coupled to the base station systems, the interface comprising a packet-switched element to manage communication over a network between the serving GPRS support node and at least one of the base station systems,

wherein the packet-switched element comprises an Internet Protocol element to communicate packets with an Internet Protocol element in the at least one base station system.

20. The serving General Packet Radio Service support node of claim 19, further comprising a User Datagram Protocol transport component to manage connections over the network.

21. The serving General Packet Radio Service support node of claim 19, further comprising a network services layer to transport data units containing signaling and bearer traffic over the network.

40. The SGSN of claim 2, wherein the connectionless, packet-based protocol layer of the interface comprises a network layer, and the interface further comprises a transport layer to manage connections over the network.

41. The SGSN of claim 40, wherein the controller comprises a network services layer to transport packets through the transport and network layers.

42. A system for use in a mobile communications network having a plurality of cell sites, comprising:

an interface adapted to communicate with a base station system in a cell site over a network; and

a controller adapted to transmit and receive data through the interface over the network with the base station system according to a packet-switched protocol,

wherein the interface comprises a network layer to manage communications of packets over the network, and a transport layer to manage connections over the network,

wherein the controller comprises a network services layer to transport packets through the transport and network layers,

wherein the network layer comprises an Internet Protocol layer to communicate over a Gb network with an Internet Protocol layer of the base station system.

43. The system of claim 42, wherein the transport layer comprises a User Datagram Protocol layer.

44. The system of claim 43, wherein the network services layer comprises a General Packet Radio Service network services layer.

46. A node for use in a mobile communications network having a system controller, the node comprising:

one or more radio transceivers adapted to communicate with mobile stations; and

a module coupled to the one or more radio transceivers and adapted to communicate through a Gb interface with the system controller according to a packet-switched protocol,

wherein the packet-switched protocol comprises a connectionless, packet-based protocol.

49. The serving General Packet Radio Service support node of claim 19, wherein the Internet Protocol element is adapted to communicate Internet Protocol packets to the Internet Protocol element in the at least one base station system over a Gb interface.

50. A node for use in a mobile communications network having a system controller, the node comprising:

one or more radio transceivers adapted to communicate with mobile stations;

a module coupled to the one or more radio transceivers and adapted to communicate with the system controller; and

an Internet Protocol layer to communicate over a Gb network with the system controller according to an Internet Protocol.

51. A method of communicating in a mobile communications system having a base station system, a system controller, and an interface between the base station system and the system controller, the method comprising:

transmitting and receiving data packets over the interface between the base station system and system controller according to a packet-switched protocol,

wherein transmitting and receiving data packets comprises an Internet Protocol layer in the system controller transmitting and receiving Internet Protocol packets over a Gb network with an Internet Protocol layer in the base station system.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.